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March 29, 2016

VIA FEDERAL EXPRESS

Russell Kneipp,
President
Industrial Parts Depot, LLC
23231 Normandie Avenue
Torrance, CA 90501-5096

Re: U.S. Patents Nos 6,260,472, 6,557,514, and 6,862,976

Dear Mr. Kneipp:

We write on behalf of our client Federal-Mogul World Wide, Inc. (hereinafter "Federal-Mogul") to inform you that Industrial Parts Depot, LLC ("IPD") is making, using, offering for sale, selling or importing into the United States IPDSteel™ pistons, including but not limited to C7 and C15 friction welded pistons (hereinafter "C7" and "C15" pistons), which read on United States Patent Nos. 6,260,472 (the '472 patent); 6,557,514 (the '514 patent) and 6,862,976 (the '976 patent) (collectively the "Federal-Mogul patents"). Because we recently learned of the situation, we bring it to your attention at this time. Although it is likely that you already are well aware of the Federal-Mogul patents, we present below a detailed analysis laying out exactly how the limitations of representative claims of the Federal-Mogul patents are present in at least the C7 and C15 pistons.

THE FEDERAL-MOGUL PATENTS

a. United States Patent 6,260,472 (the '472 Patent)

The '472 patent is titled "One-Piece Integral Skirt Piston and Method of Making the Same" and is assigned to Federal-Mogul. For your convenience, a copy of the '472 patent is enclosed. The '472 patent was granted on July 17, 2001. It was subject to a combined ex parte reexamination. A Reexamination Certificate issued on August 4, 2009 under 35 U.S.C. § 307 as US 6,260,472 C1. Claims 2-6 were determined to be patentable.

Claim 2-6 recite and cover, among other things, a method of making a piston that includes forming upper and lower crown members of steel with the lower crown member including a pair of pin bosses and a skirt formed as one piece with and bridging the pin bosses. The crown members are recited as and cover being formed with connecting collars that are aligned and brought into engagement and friction welded together. Weld flash is recited as and

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covers being formed at the joining faces that are projecting outwardly of the connecting collars and projecting inwardly of the connecting collars. The weld flash projecting radially inwardly of the connecting collars is recited as and covers being open to the space between the inner-most margins of the pin bosses.

b. US Patent 6,557,514 (the '514 Patent)

The '514 patent is titled "Closed-Galley Monobloc Piston Having Oil Drainage Groove" and is also assigned to Federal-Mogul. For your convenience, a copy of the '514 patent is also enclosed. The '514 patent claims priority to a provisional application filed October 23, 2001. The '514 patent was granted on May 6, 2003.

Claims 1-9 of the '514 patent are directed to and cover among other things a monobloc piston assembly and method having a piston head with a plurality of ring grooves and rings, an oil cooling gallery formed in the piston head, a pair of pin bosses extending from the piston head, a piston skirt formed as one piece with the pin bosses, and an oil drainage groove formed in the piston head at a location below the lowest ring groove. The oil drainage groove has a bottom wall that is continuous between the pin bosses, but is discontinuous and open to the side faces of the pin bosses.

c. US Patent 6,862,976 (the '976 Patent)

The '976 patent is titled "Monobloc Piston" and it also is assigned to Federal-Mogul. For your convenience, a copy of the '976 patent is also enclosed. The '976 patent was filed on September 24, 2002 and claims a priority date of October 23, 2001. The '976 patent was granted on March 8, 2005.

Claims 1 -2 of the '976 patent are directed to and cover among other things a monobloc piston having a piston body fabricated of at least two steel parts that are joined by a weld joint, a ring belt with ring grooves, a combustion bowl formed in the upper surface, an oil gallery, a pair of pin bosses and a piston skirt formed as one piece with the pin bosses. The claims also recite several dimensional relationships, namely:

$ISMD = 42 - 55\% \text{ of } BD$, where ISMD is the mean diameter of the inner support wall and BD is the outer diameter of the ring belt wall;

$ISW = 3 - 8\% \text{ of } BD$, where ISW is the sectional width of the inner support wall;

$CH > 53\% \text{ of } BD$, where CH is the compression height measured between the pin bore axis and the upper surface;

$TLH > 4\% \text{ of } BD$, where TLH is the top land height measured between the top of the upper ring groove and the upper surface;

$SL = 30 - 80\% \text{ of } BD$, where SL is the length of the skirt measured between the upper and lower ends of the skirt;

$SW = 2.5 - 6.5\% \text{ of } BD$, where SW is the thickness of the skirt;

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$GA = 150 - 250\%$ of BD^2 , where GA is the area of the oil gallery, and

$GV = 5 - 20\%$ of $BD^2 \times CH$, GV is the volume of the oil gallery.

2. THE IPDSTEEL™ C7 AND C15 PISTONS

As stated above, at least the C7 and C15 pistons (and assembly) read on the Federal-Mogul Patents.

For example, the limitations of claim 5 of the '472 patent are satisfied by both the C7 and C15 pistons: the upper and lower crown portions of these pistons are made of steel and are friction welded together; weld flash resulting from friction welding projects both radially outward (within the oil gallery) and radially inward (within the undercrown region) from the central connecting collars of the crown members. Both the C7 and C15 piston are formed with pin bosses and the inwardly projecting weld flash is accessible through the open space between the inner faces of the pin bosses.

Also, the limitations of claim 8 of the '514 patent are satisfied by the C15 piston. The C15 piston has a piston head with a combustion bowl in the top surface and a plurality of ring grooves (three) in an outer surface of the ring belt. The pin bosses have outer surfaces that are formed to be recessed inwardly of the outer surface of the ring belt. The C15 piston has a skirt that is formed as one piece with the piston body and pin bosses, and it has a groove below the three ring grooves (4th groove) that is continuous between the pin bosses. As such, each and every limitation of claim 8 of the '514 patent is present for the C15 piston.

Similarly, the C15 pistons read on claim 9 of the '514 patent. As you no doubt are aware, piston rings are sold along with the piston body that fit in the top three ring grooves of the C15 piston while that the 4th oil drainage groove is free of any piston rings. The 4th oil drainage groove is open to the outer surfaces of the pin bosses by provision of the drain channels. As such, each and every limitation of claim 9 of the '514 patent is present in the case of the C15 piston.

The C7 and C15 pistons also read on claim 1 of the '976 patent. The C7 and C15 pistons have piston heads with a combustion bowl in the top surface and a plurality of ring grooves (three) in an outer surface of the ring belt. The pin bosses have outer surfaces that are formed to be recessed inwardly of the outer surface of the ring belt. The C7 and C15 pistons have skirts that are formed as one piece with the piston body and pin bosses. The pistons have a groove below the three ring grooves (4th groove) that is continuous between the pin bosses. Inspection of the pistons shows that the C7 and C15 pistons also satisfy the various dimensional relationship requirements literally and under the Doctrine of Equivalents.

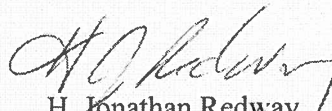
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3. CONCLUSION

As laid out above, at least the C7 and C15 pistons read on and therefore infringe the Federal-Mogul patents. Federal-Mogul demands that IPD immediately stop manufacturing, using, selling, or offering these pistons or any other two-piece friction welded piston or like products for sale in the United States or that it agree to meet with Federal-Mogul promptly so that an appropriate remedy can be reached taking into account IPD pistons that have been sold in the past as well as IPD pistons that are to be sold in the future. We would appreciate hearing from you on this matter as soon as practical but no later than April 12, 2016.

Very truly yours,



H. Jonathan Redway

cc: Lisa Mikalonis, Esq.

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